

Applicants: Paul Simmons et al.  
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**INFORMATION DISCLOSURE STATEMENT**

In accordance with their duty of disclosure under 37 C.F.R. §1.56, applicants direct the Examiner's attention to the references listed below which are also listed on the PTO-1449 form attached hereto as **Exhibit A**.

Items 1-24 are U.S. Patents or U.S. Patent Application Publications. No copies of these items are attached hereto as permitted by 37 C.F.R. §1.98(a)(2)(ii).

The above-identified application claims benefit under 35 U.S.C. §120 of U.S. Serial No. 10/030,411, filed April 11, 2002, now U.S. Patent No. 7,122,178, issued October 17, 2006. Because items 25-74 were previously submitted to the U.S. Patent and Trademark Office or cited in connection with U.S. Serial No. 10/030,411, copies of these items are not submitted herewith as permitted by 37 C.F.R. §1.98(d).

1. U.S. Patent No. 5,197,985 issued to Caplan et al. on March 30, 1993;
2. U.S. Patent No. 5,226,914 issued to Caplan et al. on July 13, 1993;
3. U.S. Patent No. 5,486,359 issued to Caplan et al. on January 23, 1996;
4. U.S. Patent No. 5,591,625 issued to Gerson et al. on January 7, 1997;

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5. U.S. Patent No. 5,811,094 issued to Caplan on September 22, 1998;
6. U.S. Patent No. 5,827,740 issued to Pittenger on October 27, 1998;
7. U.S. Patent No. 5,837,539 issued to Caplan et al. on November 17, 1998;
8. U.S. Patent No. 5,922,597 issued to Verfaillie et al. on July 13, 1999;
9. U.S. Patent No. 5,980,887 issued to Isner et al. on November 9, 1999;
10. U.S. Patent No. 6,022,540 issued to Bruder et al. on February 8, 2000;
11. U.S. Patent No. 6,087,113 issued to Caplan et al. on July 11, 2000;
12. U.S. Patent No. 6,261,549 issued to Fernandez et al. on July 17, 2001;
13. U.S. Patent No. 6,322,784 issued to Pittenger et al. on November 27, 2001;
14. U.S. Patent No. 6,335,195 issued to Rodgers et al. on January 1, 2002;
15. U.S. Patent No. 6,387,367 issued to Davis-Sproul et al. on May 14, 2002;

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16. U.S. Patent No. 6,387,369 issued to Pittenger et al. on May 14, 2002;
17. U.S. Patent No. 6,645,727 issued to Thomas et al. on November 11, 2003;
18. U.S. Patent No. 6,709,864 issued to Pittenger et al. on March 23, 2004;
19. U.S. Patent No. 6,875,430 issued to McIntosh et al. on April 5, 2005;
20. U.S. Patent No. 7,122,178 Issued to Simmons et al., on October 17, 2006;
21. U.S. Application Publication No. 2004-0107453, published June 3, 2004;
22. U.S. Application Publication No. 2006-0008452, published January 12, 2006;
23. U.S. Application Publication No. 2005-0158289, published July 21, 2005;
24. U.S. Application Publication No. 2005-0281790, published December 22, 2005;
25. PCT International Publication No. WO 01/011011, published February 15, 2001;
26. Alberico et al. (1987) Blood 69, page 1120;

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27. Allen, T.D., "Microenvironments in Haemopoietic and Lymphoid Differentiation" CIBA Found. Symposium 84, pages 38-67;
28. Allen et al. (1990) Immunol. Ser. 49, page 1;
29. Allen et al. (1990) "Marrow Biology and Stem Cells" Immunol. Ser. 49, pages 1-38;
30. Anklesaria et al. (1989) Blood 74, page 1144;
31. Anklesaria et al. (1987) Proc. Nat'l Acad. Sci. USA 84, page 7681;
32. Bennett et al. (1991) J. Cell Sci. 99, page 131;
33. Bentley (1982) Br. J. Haematol 50, page 1;
34. Castro-Malaspina et al. (1980) "Characterization of Human Bone Marrow Fibroblast Colony-Forming Cells and Their Progeny" Blood 56, page 289-301;
35. Castro-Malaspina et al. (1981) "Human Megakaryocyte Stimulation of Proliferation of Bone Marrow Fibroblasts" Blood 57, page 781-787;
36. Clarke, Emer, "Mesenchymal Cells" [www.stemcell.com](http://www.stemcell.com) (mini-review);
37. Dexter et al. (1977) "Conditions Controlling the Proliferation of Haemopoietic Stem Cells in Vitro" J. Cell Physiol. 91, page 335-344;

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38. Dexter et al. (1984) Kroc Found. Ser. 18, pages 57-96;
39. Fong et al. (1997) "Nonradioactive, Agarose Minigel Procedure for Telomeric Repeat Amplification Protocol" BioTechniques 23, page 1029-1032;
40. Friedenstein (1976) Int'l R. Cytology 47, page 327;
41. Friedenstein (1980) "Stromal Mechanisms of Bone Marrow: Cloning in Vitro and Retransplantation in Vivo" Immunology of Bone Marrow Transplantation, pages 19-29;
42. Friedenstein et al. (1970) Cell Tissue Kinetics 3, page 393;
43. Friedenstein et al. (1992) Bone and Mineral 18, page 199;
44. Gronthos, S., et al. (2003) J. Cell Sci. 116, pages 1827-1835;
45. Gronthos, S., et al. (1994) "The STRO-1+ Fraction of Adult Human Bone Marrow Contains the Osteogenic Precursors, Blood 84, pages 4164-4173;
46. Gronthos, S., et al. (1995) Blood 85, page 929;
47. Hellstrom et al. (1999) Development 126, page 2047;
48. Huang and Terstappen (1992) Nature 360, page 745;
49. Keating et al. (1982) Nature 298, page 280;

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50. Kim et al. (1994) Science 266, page 2011;
51. Knopse et al. (1966) Blood 28, page 398;
52. Knopse et al. (1972) Blood 39, page 331;
53. Lichtman (1981) Experimental Hematology 9, page 391;
54. Long (1992) Experimental Hematology 20, page 288;
55. MacManus and Weiss (1984) Blood 64, page 1036;
56. McIntyre and Bjornson (1986) Exp. Hematol. 14, page 833;
57. Miltenyi et al. (1990) Cytometry 11, page 231;
58. Owen (1985) Bone and Mineral Research 3, page 1;
59. Owen and Friedenstein (1988) CIBA Found. Symposium 136, page 42;
60. Perkins and Fleischman (1990) Blood 75, page 620;
61. Piersma et al. (1983) Br. J. Haematol. 54, page 285;
62. Rothstein et al. (1985) Blood 65, page 744;
63. Simmons and Gronthos (1991) Int'l J. Cell Cloning 9, page 408 (abstract);

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64. Simmons, P.J., et al. (1994) "Isolation, Characterization and Functional Activity of Human Marrow Stromal Progenitors in Hemopoiesis" Advances in Bone Marrow Purging and Processing: Fourth Int'l Symposium 389, pages 271-280;
65. Simmons et al. (1987) Nature 328, page 429;
66. Simmons and Torok-Storb (1991) Blood 78, page 55;
67. Simmons and Torok-Storb (1991) Blood 78, page 2848;
68. Tavassoli and Friedenstein (1983) Ann. J. Hematol. 15, page 195;
69. Tavassoli and Crosby (1968) Science 161, page 54;
70. Testa et al. (1988) "Long-Term Bone Marrow Damage After Cytotoxic Treatment: Stem Cells and Microenvironment in Hematopoiesis: Long-Term Effects of Chemotherapy and Radiation" Hematol. 8, pages 75-92;
71. Van Vlasselaer et al. (1994) Blood 84, page 753;
72. Waller et al. (1995) Blood 85, page 2422;
73. Weiss (1976) Anatomical Record 186, page 161;
74. Zoltowska et al. (2001) Arch. Immunol. Ther. Exp. (Warsz) 49, pages 59-61.

This Information Disclosure Statement is being submitted under 37 C.F.R. §1.97(b)(3), and therefore no fee is deemed

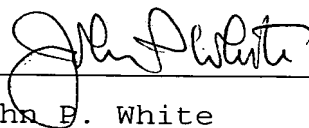
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necessary. The Examiner is respectfully requested to make these references of record in the present application by initialing and returning a copy of the enclosed Form PTO 1449.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicants' undersigned attorney invites the Examiner to telephone him at the number provided below.

No fee is deemed necessary in connection with the filing of this Amendment in Response to December 15, 2006 Office Action and Information Disclosure Statement. However, if any fee is required authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

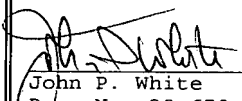
Respectfully submitted,



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I hereby certify that this correspondence is being deposited this date with the U.S. Postal Service with sufficient postage as first class mail in an envelope addressed to:

Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.



John P. White  
Reg. No. 28,678

1/16/07  
Date



Form PTO-1449	U.S. Department of Commerce Patent and Trademark Office	Application Number	10/813,747
		Filing Date	March 29, 2004
		First Named Inventor	Paul Simmons et al.
		Art Unit	1644
		Examiner Name	M. Belyavskiy
		Attorney Docket No.	75990-B/JPW/BJA

**INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)

**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
	US	5,197,985	03-30-1993	Caplan et al.
	US	5,226,914	07-13-1993	Caplan et al.
	US	5,486,359	01-23-1996	Caplan et al.
	US	5,591,625	01-07-1997	Gerson et al.
	US	5,811,094	09-22-1998	Caplan
	US	5,827,740	10-27-1998	Pittenger
	US	5,837,539	11-17-1998	Caplan et al.
	US	5,922,597	07-13-1999	Verfaillie et al.
	US	5,980,887	11-09-1999	Isner et al.
	US	6,022,540	02-08-2000	Bruder et al.
	US	6,087,113	07-11-2000	Caplan et al.
	US	6,261,549	07-17-2001	Fernandez et al.
	US	6,322,784	07-17-2001	Pittenger et al.
	US	6,335,195	01-01-2002	Rodgers et al.
	US	6,387,367	05-14-2002	Davis-Sproul et al.
	US	6,387,369	05-14-2002	Pittenger et al.
	US	6,645,727	11-11-2003	Thomas et al.
	US	6,709,864	03-23-2004	Pittenger et al.
	US	6,875,430	04-05-2005	McIntosh et al.
	US	7,122,178	10-17-2006	Simmons et al.
	US	2004-0107453	06-03-2004	<b>Furcht</b>
	US	2006-0008452	01-12-2006	<b>Simmons</b>
	US	2005-0158289	07-21-2005	<b>Simmons</b>
	US	2005-0281790	12-22-2005	<b>Simmons</b>

**FOREIGN PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>
	WO	01/011011	02-15-2001		

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DATE CONSIDERED

\*EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds of Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English Language Translation is attached.

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**Exhibit A**

<b>Form PTO-1449</b>		<b>U.S. Department of Commerce Patent and Trademark Office</b>		<b>Application Number</b>	10/813,747
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				<b>Filing Date</b>	March 29, 2004
				<b>First Named Inventor</b>	Paul Simmons et al.
				<b>Art Unit</b>	1644
				<b>Examiner Name</b>	M. Belyavskyi
				<b>Attorney Docket No.</b>	75990-B/JPW/BJA
<b>NON PATENT LITERATURE DOCUMENTS</b>					
<b>Examiner Initials<sup>1</sup></b>	<b>Cite No.<sup>1</sup></b>	<b>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.</b>			<b>T<sup>2</sup></b>
		Alberico et al. (1987) Blood 69, page 1120			
		Allen, T.D., "Microenvironments in Haemopoietic and Lymphoid Differentiation" CIBA Found. Symposium 84, pages 38-67			
		Allen et al. (1990) Immunol. Ser. 49, page 1			
		Allen et al. (1990) "Marrow Biology and Stem Cells" Immunol. Ser. 49, pages 1-38			
		Anklesaria et al. (1989) Blood 74, page 1144			
		Anklesaria et al. (1987) Proc. Nat'l Acad. Sci. USA 84, page 7681			
		Bennett et al. (1991) J. Cell Sci. 99, page 131			
		Bentley (1982) Br. J. Haematol 50, page 1			
		Castro-Malaspina et al. (1980) "Characterization of Human Bone Marrow Fibroblast Colony-Forming Cells and Their Progeny" Blood 56, page 289-301			
		Castro-Malaspina et al. (1981) "Human Megakaryocyte Stimulation of Proliferation of Bone Marrow Fibroblasts" Blood 57, page 781-787			
		Clarke, Emer, "Mesenchymal Cells" www.stemcell.com (mini-review)			
		Dexter et al. (1977) "Conditions Controlling the Proliferation of Haemopoietic Stem Cells in Vitro" J. Cell Physiol. 91, page 335-344			
<b>EXAMINER SIGNATURE</b>		<b>DATE CONSIDERED</b>			
<p><b>*EXAMINER:</b> Initial if citation considered, whether or not citation is in conformance with MPEP 609: Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup>Applicant's unique citation designation number (optional). <sup>2</sup>Applicant is to place a checkmark here if English language Translation is attached.</p>					

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	<b>Examiner Name</b>	M. Belyavskyi
	<b>Attorney Docket No.</b>	75990-B/JPW/BJA

### NON PATENT LITERATURE DOCUMENTS

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		Dexter et al. (1984) Kroc Found. Ser. 18, pages 57-96	
		Fong et al. (1997) "Nonradioactive, Agarose Minigel Procedure for Telomeric Repeat Amplification Protocol" BioTechniques 23, page 1029-1032	
		Friedenstein (1976) Int'l R. Cytology 47, page 327	
		Friedenstein (1980) "Stromal Mechanisms of Bone Marrow: Cloning in Vitro and Retransplantation in Vivo" Immunology of Bone Marrow Transplantation, pages 19-29	
		Friedenstein et al. (1970) Cell Tissue Kinetics 3, page 393	
		Friedenstein et al. (1992) Bone and Mineral 18, page 199	
		Gronthos, S., et al. (2003) J. Cell Sci. 116, pages 1827-1835	
		Gronthos, S., et al. (1994) "The STRO-1+ Fraction of Adult Human Bone Marrow Contains the Osteogenic Precursors, Blood 84, pages 4164-4173	
		Gronthos, S., et al. (1995) Blood 85, page 929	
		Hellstrom et al. (1999) Development 126, page 2047	
		Huang and Terstappen (1992) Nature 360, page 745	
		Keating et al. (1982) Nature 298, page 280	
		Kim et al. (1994) Science 266, page 2011	

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		Knopse et al. (1966) Blood 28, page 398			
		Knopse et al. (1972) Blood 39, page 331			
		Lichtman (1981) Experimental Hematology 9, page 391			
		Long (1992) Experimental Hematology 20, page 288			
		MacManus and Weiss (1984) Blood 64, page 1036			
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		Miltenyi et al. (1990) Cytometry 11, page 231			
		Owen (1985) Bone and Mineral Research 3, page 1			
		Owen and Friedenstien (1988) CIBA Found. Symposium 136, page 42			
		Perkins and Fleischman (1990) Blood 75, page 620			
		Piersma et al. (1983) Br. J. Haematol. 54, page 285			
		Rothstein et al. (1985) Blood 65, page 744			
		Simmons and Gronthos (1991) Int'l J. Cell Cloning 9, page 408 (abstract)			
		Simmons, P.J., et al. (1994) "Isolation, Characterization and Functional Activity of Human Marrow Stromal Progenitors in Hemopoiesis" Advances in Bone Marrow Purging and Processing: Fourth Int'l Symposium 389, pages 271-280			
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		Simmons et al. (1987) Nature 328, page 429			
		Simmons and Torok-Storb (1991) Blood 78, page 55			
		Simmons and Torok-Storb (1991) Blood 78, page 2848			
		Tavassoli and Friedenstein (1983) Ann. J. Hematol. 15, page 195			
		Tavassoli and Crosby (1968) Science 161, page 54			
		Testa et al. (1988) "Long-Term Bone Marrow Damage After Cytotoxic Treatment: Stem Cells and Microenvironment in Hematopoiesis: Long-Term Effects of Chemotherapy and Radiation" Hematol. 8, pages 75-92			
		Van Vlasselaer et al. (1994) Blood 84, page 753			
		Waller et al. (1995) Blood 85, page 2422			
		Weiss (1976) Anatomical Record 186, page 161			
		Zoltowska et al. (2001) Arch. Immunol. Ther. Exp. (Warsz) 49, pages 59-61			
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